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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,928	08/20/2003	Marc A. Woog	116903	4764

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EXAMINER	
DUONG, FRANK	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/643,928	WOOG, MARC A.	
	Examiner	Art Unit	
	Frank Duong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to communications dated 08/20/03. Claims 1-16 are pending in the application.

Information Disclosure Statement

2. The listing of references in the specification on page 22 is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. Figure 1 has an improper margin and it should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per base claim 1, it is deemed to be indefinite for the following rationales:

First, the terms "the setup," "the related Home Location Register," "the address," and "the Mobile Services Switching Center," recited on lines 12-14, lack of antecedent basis.

Second, claim 1 is narrative in form and does not contain positively recited steps of a specific process. Note that method claims should set forth a series of steps in the active tense in an instruction-like manner thereby reciting an actual method. Dependent claims should further limit base claims by reciting additional steps in a like-wise fashion. See *Exparte Erlich 3USPQ2d 1011 at 1017[6].*

Third, the term "the other or one of the other networks," recited on line 6, is rather vague and broad. It is unclear what "other networks" referred to. In addition, it fails to set forth the metes and bounds on the claimed invention that the Applicant seeks to protect.

As per claim 3, the term "the centralized control module," recited on lines 1-2, lacks of antecedent basis.

As per claims 4-6, the term "and/or" is vague. It is unclear what is the scope of the protection the Applicant is sought to protect.

As per claim 8, the term "the local control module," recited on line 5, lacks of antecedent basis.

As per claim 9, it is deemed to be indefinite for the following rationales:

The term "the local control module," recited on line 2, lacks of antecedent basis.

The term "can directly or indirectly be," recited on line 4, fails to set forth a positive limitation.

The remaining claims variously depend from their indefinite parent claim 1.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 11-16 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility.

As per claims 11-16, a single claim that claims both an apparatus ("Mobile Services Switching Center") and method steps ("method as defined in claim 1") is held to be 101 as being directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. See *Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).*

Claims 11-16 also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rautiola et al (USP 5,924,030) (hereinafter "Rautiola") and Niemi et al (USP 6,853,851) (hereinafter "Niemi").

Regarding **claim 1**, in accordance with Rautiola reference entirety, Rautiola discloses a method for integrated communications in a telecommunications network (*Fig. 1 and accompanied description begins at col. 5, line 55 to col. 7, line 10 and thereinafter*), which combines a Mobile Telecommunications Network (PLMN) (2) and at least an other, wired packet switching or circuit switched network (*1 and 4*), with *a subscriber's Mobile Station (MS) (9) designed to operate in the Mobile Telecommunications Network (PLMN) (2) and a second communication terminal of the subscriber designed to operate in the other or one of the other networks (4) (MS 9 of Fig. 1 is a dual mode mobile station operating in cellular network 2 and nanocell*

extension 4) and with an extended Mobile Services Switching Center (MSCX) (*10 and 11*) that over a gateway (IP-GW) (10) connects to a packet switching network (*13 or 14*) (*col. 6, line 42 to col. 7, line 9, it is disclosed 13 or 14 is a packet network (ATM)*), characterised in that, when the Mobile Station (MS) (9) is detached from the Mobile Telecommunications Network (PLMN) (2) (*col. 9, lines 50-52, it is disclosed mobile station 9 using a detach message to inform about leaving cellular network 2*), the second communication terminal is registered at the Mobile Telecommunications Network (PLMN) in such a way that a request for routing information for a setup of a connection to the subscriber's Mobile Station (MS), sent to a related Home Location Register (HLR) (11) will be answered (*call forwarding*) with an address of the extended Mobile Services Switching Center (MSCX) (10) to which the second communication terminal is attached (*col. 10, lines 1-11, it is disclosed the mobile station, when roaming to the extension network 4, uses the attach message to inform the gateway 10 about it arrival. Then, the status information of the subscriber in the database 11 will be YES and the call for the subscriber will be forwarded to it at the extension network 4*).

Rautiola may not disclose the claimed limitation of "*a subscriber's Mobile Station (MS)) designed to operate in the Mobile Telecommunications Network (PLMN) (circuit switch) and a second communication terminal of the subscriber designed to operate in the other or one of the other networks (packet switch).*" (*Note: This claimed limitation is vague. It does not clearly state dual mode mobile station operating in circuit switch mode and packet switch mode. However, Examiner interprets this limitation as such in*

according to that taught in the specification). However, such limitation lacks thereof from Rautiola is well known and taught by Niemi.

In an analogous art, Niemi discloses *a dual mode Mobile Station ('851, Fig. 2, 4 or 12) operates in a public cellular network (23) and a private network (*22) (col. 6, line 55 to col. 7, line 16) in a telecommunications system (Fig. 2) to provide an integrated system that supports home office and small office users ('851, col. 2, lines 42-53). The private network 22 with the dual mode mobile station (21) would be easily implemented a regular cellular network to provide support for home office and small office users.

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement Niemi's private network 22 and dual mode subscriber 21 into Rautiola's system to arrive the claimed invention with a motivation to provide an integrated system that supports home office and small office users ('851, col. 2, lines 42-53).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein a local control module (IP-CL) (*'030, Fig. 1; BTU 12 or '851; Mux 434*) is used in order to forward a registration request over the packet switching network (14) to the extended Mobile Services Switching Center (MSCX) (10) which uses a centralised control module (TCM) in order to process the received request and to attach or detach the second communication terminal ('030, *col. 9, lines 9-14, it is disclosed base station 12 support the mobile station 9 in extension network 4 to include sending IMSI attach message to inform its arrival (col. 10, lines 1-3) or '851, col. 10, lines 31-52, it is disclosed Mux 434,*

when outside of private network, operates as regular GSM device sending voice and signaling through element 442).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein a centralised control module (TCM) (BTS 12) updates the record related to the subscriber's Mobile Station (MS) (*col. 10, lines 4-5*), which is stored in the Home Location Register (HLR) (11), whenever the second communication terminal is attached to or detached from Mobile Telecommunications Network (PLMN) ('030, *col. 10, lines 1-12*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein data, required to establish connections for incoming ***and/or*** outgoing calls between the extended Mobile Services Switching Center (MSCX) and the second communication terminal, are stored in a local database (11), preferably in the Visitor Location Register (VLR) (VBD) assigned to the extended Mobile Services Switching Center (MSCX) (10) (*see '030, Fig. 1 for connection details between database 11 and gateway 10*).

Regarding **claim 5**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola further discloses wherein, for incoming ***and/or*** outgoing calls, connections to the second communication terminal are established over a packet switching or a circuit switched network ('*030, see Fig. 1, elements 1 or 10 or '851, Fig. 2, element 23*).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further may not disclose wherein all

charges resulting from incoming ***and/or*** outgoing calls of the second communication terminal are billed to the account related to the subscriber's Mobile Station (MS). However, Rautiola in view of Niemi specifically discloses every subscriber registered into the extension 4 has his/her own ISDN number of the fixed network by which the subscriber visiting the extension at the moment can be reached (*'030, col. 8, lines 15-20*). It would make sense to bill the outgoing/incoming calls to the mobile station's account since the database in the visiting and mobile station's own network has information whereabouts of the subscriber. Thus, it would have been obvious to those skilled in the art to implement a billing to the mobile station's account since all the information whereabouts of the mobile subscriber are in the database.

Regarding **claim 7**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein the Mobile Station (MS) and the second communication terminal are integrated in a single communication terminal (U-MS) ('851, Fig. 2; element 21).

Regarding **claim 8**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein the subscriber's Mobile Station MS is switched off in order to get detached from the Mobile Telecommunications Network (PLMN) or wherein the Mobile Station (MS) and the second communication terminal are attached to and detached from the Mobile Telecommunications Network PLMN) by means of a local control module (*IMSI detach/attach is discussed at col. 9, lines 58-59 and col. 10, lines 1-3 of '030 or '851, Fig. 12 depicts Mux 127 for selecting between different air interfaces*).

Regarding **claim 9**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein a local control module (IP-CL) (*'851, Fig. 4; Mux 434*) automatically performs the handover between the Mobile Station (MS) and the second communication, whenever the preferred unit is directly or indirectly attached to the Mobile Telecommunications Network (PLMN) ('851, col. 10, lines 31-52).

Regarding **claim 10**, in addition to features recited in base claim 1 (see rationales discussed above), Rautiola in view of Niemi further discloses wherein the Mobile Station (MS) and the second communication terminal share the same identity and address number (IMSI, MSISDN) (*'030, col. 6, lines 5-11*).

Regarding **claim 11**, Rautiola in view of Niemi shows Mobile Services Switching Center (MSCX) (*'030, Fig. 1; element 10*) operating according to a method as defined in claim 1 (see rationales discussed above).

Regarding **claim 12**, in addition to features recited in base claim 11 (see rationales discussed above), Rautiola in view of Niemi further discloses an IP-Interface (IP-IF) (4) with a gateway (IP-GW) (10), a centralised control module (TCM) (12) and a database (VLRX) (11) designed to store data required to establish a connection to the second communication terminal (*'303, Fig. 3 depicted the environment above and '851, Fig. 2 depicted the dual mode mobile station 21*).

Regarding **claim 13**, in addition to features recited in base claim 11 (see rationales discussed above), Rautiola in view of Niemi further discloses a control unit

designed to set up a connection to the second communication terminal that operates in the switched network (PSTN/ISDN) ('303, Fig. 1; element 1).

Regarding **claim 14**, Rautiola in view of Niemi discloses Integrated communication terminal (U-MS) operating according to a method as defined in claims 1 (see rationales discussed above), comprising modules, which correspond to the Mobile Station (MS) and to the second communications terminal (*see '851, Fig. 4; element 41, a dual mode mobile station*).

Regarding **claim 15**, in addition to features recited in base claim 14 (see rationales discussed above), Rautiola in view of Niemi further discloses an application that is designed to perform handovers between said modules automatically (see '851, Fig. 4; Layer 43 having Mux 434 for automatically handovers (col. 10, lines 31-52)).

Regarding **claim 16**, Rautiola in view of Niemi discloses Telecommunications network comprising a Mobile Services Switching Center (MSCX) (*'030, Fig. 1; element 10*) as defined in claim 11 (see rationales discussed above).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gillig et al (USP 4,989,230).

Byrne et al (USP 6,708,028).

Sayers et al (USP 6,539,237).

Roberts et al (USP 6,208,869).

Boltz et al (USP 5,943,620).

Salkintzis et al, WLAN-GPRS Integration For Next-Generation Mobile Data Networks, IEEE, pages 112-124, October 2002.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 4, 2007

FRANK DUONG
PRIMARY EXAMINER